Assessing the Proliferation of Smallpox

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Threat of Smallpox Attack: "Low Probability, High Consequence"?

- The debate is focused on the consequences of a smallpox attack:
  - How many people could die from an attack?
  - How contagious is smallpox?
  - How effective are different vaccination strategies?
  - What are the side-effects of the vaccine?
- Assessments of probability of attack are absent

Assessing Probability of Smallpox Attack

- The more nations that possess the virus, the higher the likelihood that smallpox will be used as a weapon, stolen, transferred to terrorists, or released accidentally

- Nations with regimes hostile to the United States and history of state-sponsored terrorism are more worrisome

Availability of Smallpox Virus

- Last naturally-occurring case in 1977; smallpox virus no longer exists in nature
- Officially located only at CDC in U.S. and State Research Center of Virology and Biotechnology (Vector) in Russia
- 14 nations alleged to possess smallpox today

Estimated Proliferation of Smallpox

- China
- Cuba
- ***France***
- India
- Iran
- ***Iraq***
- Israel
- Libya
- ***North Korea***
- Pakistan
- ***Russia***
- Syria
- Taiwan
- Yugoslavia (Serbia)

Sources: Wendy Orent, Richard Preston, Jonathan Tucker, Ken Alibek, CIA

Proliferation Routes

- **BW Program**: Retained virus after local and global eradication for use in BW program
- **Bioprospecting**: Acquired covertly from another country after local eradication but prior to global eradication
- **Inadvertent**: Accidental retention of virus after global eradication and appropriated for BW program
- **Theft or Transfer**: From depository or illegal stockpile to another country or to a terrorist group

Proliferation Assessment Framework

- **Possible**: Country had access to variola virus while engaged in BW program
- **Uncertain**: Country initiated BW program shortly after last recorded access to variola
- **Unlikely**: Country initiated BW program well after last recorded access to variola vrius or after global eradication
- **Unknown**: Existence and/or duration of BW program unknown

Smallpox Proliferation Assessment

- **Possible**
  - China
  - Israel
  - North Korea
  - Russia
- **Uncertain**
  - Egypt
  - Iraq
- **Unlikely**
  - Cuba
  - France
  - Iran
  - Libya
  - South Africa
  - Syria
  - Taiwan
- **Unknown**
  - India
  - Pakistan
  - Serbia

Summary

- Variola virus not located only in two official depositories
- Proliferation of smallpox less widespread than popular estimates but more widespread than official estimates
- Only 1 hostile regime believed to possess variola virus: North Korea

Policy Recommendations

- More Information
  - Evidence of Possession Made Public
  - Security Clearances for Members of ACIP and IOM
- More Time
  - Iraq No Longer Threat
  - Complete Evaluation of Phase I
  - Delay Implementation of Phase II